L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:568748 CAPLUS
DN 141:107355
ED Entered STN: 16 Jul 2004
TI Polyimide films with good adhesiveness and mechanical strength, precursor compositions therefor, and copper-clad laminates and printed circuit board substrates therefrom
IN Uchida, Makoto; Asano, Toyofumi
PA Nippon Kayaku Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08L077-10
ICS B32B015-08; C08L079-08; H05K001-03
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 56, 76
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004197008	A	20040715	JP 2002-369100	20021220 <--
JP 4137625	B2	20080820		
PRAI JP 2002-369100		20021220		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004197008	ICM	C08L077-10
	ICS	B32B015-08; C08L079-08; H05K001-03
	IPCI	C08J0005-18 [I,A]; C08L0077-10 [I,A]; C08L0077-00 [I,C*]; B32B0015-088 [I,A]; B32B0015-08 [I,C*]; C08L0079-08 [I,A]; C08L0079-00 [I,C*]; H05K0001-03 [I,A]
	IPCR	B32B0015-08 [I,A]; B32B0015-08 [I,C*]; C08L0077-00 [I,C*]; C08L0077-10 [I,A]; C08L0079-00 [I,C*]; C08L0079-08 [I,A]; H05K0001-03 [I,A]; H05K0001-03 [I,C*]
	FTERM	4F100/AB01B; 4F100/AB01C; 4F100/AK46A; 4F100/AK49A; 4F100/AL05A; 4F100/AT00B; 4F100/AT00C; 4F100/BA02; 4F100/BA03; 4F100/BA06; 4F100/BA07; 4F100/BA10B; 4F100/BA10C; 4F100/EH46; 4F100/EH462; 4F100/EJ42; 4F100/EJ422; 4F100/EJ86; 4F100/EJ862; 4F100/GB43; 4F100/JL11; 4J002/CL06W; 4J002/CM04X; 4J002/GF00; 4J002/GH00; 4J002/GQ00; 4J002/GQ01

AB The precursor compns. contain phenolic OH-containing polyamides and polyimide precursors. Laminates having Cu foils on both sides, prepared by adhesive bonding 2 of one side-clad polyimide films from the compns., are useful for flexible or multilayer printed circuit board substrates. Thus, 5-hydroxyisophthalic acid-4,4'-methylenebis(2,6-diethylaniline) copolymer was mixed with 3,3',4,4'-biphenyltetracarboxylic acid-4,4'-diaminodiphenyl ether-p-phenylenediamine copolymer, applied on a Cu foil, and heated to give a Cu-clad film, 2 of which were laminated via epoxy adhesive to give both-clad laminate showing peel strength 13.2 N/cm.
ST polyimide film phenolic polyamide adhesiveness; multilayer flexible printed circuit board polyimide film; biphenylcarboxylic acid aminophenyl ether phenylenamine polyimide film; copper clad polyimide film printed circuit board
IT Laminated materials
Plastic films
(adhesiveness-improved polyimide films containing phenol-containing polyamides

for printed circuit boards)
IT Printed circuit boards
(flexible; adhesiveness-improved polyimide films containing phenol-containing
polyamides for printed circuit boards)
IT Printed circuit boards
(multilayer; adhesiveness-improved polyimide films containing phenol-containing
polyamides for printed circuit boards)
IT Polyamides, uses
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(phenol-containing, adhesiveness modifiers; adhesiveness-improved polyimide films containing phenol-containing polyamides for printed circuit boards)
IT Polyethers, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyamic acid-; adhesiveness-improved polyimide films containing phenol-containing polyamides for printed circuit boards)
IT Polyamic acids
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyether-; adhesiveness-improved polyimide films containing phenol-containing
polyamides for printed circuit boards)
IT Polyimides, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-; adhesiveness-improved polyimide films containing phenol-containing
polyamides for printed circuit boards)
IT Polyethers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide-; adhesiveness-improved polyimide films containing phenol-containing
polyamides for printed circuit boards)
IT 180579-38-8P, 5-Hydroxyisophthalic acid-4,4'-methylenebis(2,6-diethylaniline) copolymer 180579-39-9P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(adhesiveness modifiers; adhesiveness-improved polyimide films containing phenol-containing polyamides for printed circuit boards)
IT 119764-39-5P
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(adhesiveness-improved polyimide films containing phenol-containing
polyamides
for printed circuit boards)
IT 7440-50-8, Copper, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(foils; adhesiveness-improved polyimide films containing phenol-containing polyamides for printed circuit boards)
RN 180579-38-8P
RN 180579-39-9P
RN 119764-39-5P
RN 7440-50-8

L4 ANSWER 2 OF 3 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN
AN 2004-563950 [55] WPIX

DNC C2004-206497 [55]
DNN N2004-445867 [55]
TI Polyimide precursor composition for single- and double-sided copper clad laminated board and substrate for multilayer printed circuit, contains polyamide containing phenolic hydroxyl group, polyimide precursor and solvent
DC A28; A85; L03; P73; V04
IN ASANO T; UCHIDA M
PA (NIPK-C) NIPPON KAYAKU KK
CYC 1
PI JP 2004197008 A 20040715 (200455)* JA 11[0] <--
JP 4137625 B2 20080820 (200857) JA 13
ADT JP 2004197008 A JP 2002-369100 20021220; JP 4137625 B2 JP 2002-369100 20021220
FDT JP 4137625 B2 Previous Publ JP 2004197008 A
PRAI JP 2002-369100 20021220
IPCI B32B0015-08 [I,C]; B32B0015-088 [I,A]; C08J0005-18 [I,A]; C08J0005-18 [I,C]; C08L0077-00 [I,C]; C08L0077-10 [I,A]; C08L0079-00 [I,C]; C08L0079-08 [I,A]; H05K0001-03 [I,A]; H05K0001-03 [I,C]
IPCR B32B0015-08 [I,A]; B32B0015-08 [I,C]; B32B0015-088 [I,A]; C08L0077-00 [I,C]; C08L0077-10 [I,A]; C08L0079-00 [I,C]; C08L0079-08 [I,A]; H05K0001-03 [I,A]; H05K0001-03 [I,C]
AB JP 2004197008 A UPAB: 20050531
NOVELTY - A polyimide precursor composition contains polyamide (A) containing phenolic hydroxyl group, a polyimide precursor (B) and a solvent (C).
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:
(1) polymer film formed by applying above precursor composition on a substrate and heating;
(2) single-sided copper clad laminated board;
(3) double-sided copper clad laminated board formed by adhering above single-sided copper clad board via an adhesive agent; and
(4) substrate for flexible printed circuit and multilayer printed circuit which has above polymer film.
USE - For polymer films used in single- and double-sided copper clad laminated board and substrates for flexible and multilayer printed circuits (all claimed).
ADVANTAGE - The polyimide precursor composition has excellent adhesive property with respect to metallic foil, and workability. The precursor composition has excellent bonding strength in electric field, without affecting mechanical characteristics with respect to metallic foils such as copper.
MC CPI: A05-F; A05-J01B; A12-A04; A12-E07A; A12-S06; L03-H04E1; L03-H04E3
EPI: V04-R07L

L4 ANSWER 3 OF 3 JAPIO (C) 2008 JPO on STN
AN 2004-197008 JAPIO
TI POLYIMIDE PRECURSOR COMPOSITION
IN UCHIDA MAKOTO; ASANO TOYOFUMI
PA NIPPON KAYAKU CO LTD
PI JP 2004197008 A 20040715 Heisei
AI JP 2002-369100 (JP2002369100 Heisei) 20021220
PRAI JP 2002-369100 20021220
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2004
IC ICM C08L077-10
ICS B32B015-08; C08L079-08; H05K001-03
AB PROBLEM TO BE SOLVED: To provide a polyimide precursor composition which is excellent in adhesive strength against a foil of copper or other metals without decreasing the mechanical strength and useful in the field of electronics materials.

SOLUTION: The polyimide precursor composition comprises (a) a polyamide containing a phenolic hydroxy group, (b) a polyimide precursor and (c) a solvent.

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